REMARKS

This application was filed with eighty-four (84) claims. Claims 4-32, 36-63 and 67-84 were canceled by preliminary amendment. Claims 1-3, 33-35, 64-66 and 85-95 have been rejected. Claims 1, 33, and 64 have been amended. Therefore, claims 1-3, 33-35, 64-66 and 85-95 are pending in the Application. Reconsideration of the application based on the remaining claims as amended and arguments submitted below is respectfully requested.

Oath/Declaration

A corrected Declaration in compliance with 37 CFR 1.67(a) identifying the citizenship of the inventor is being submitted with this paper. When originally filed, the inventor's citizenship was inadvertently omitted from the Declaration. Based on other information provided by the inventor under oath, the citizenship information has been added. If the Office requires that the Declaration be re-signed by the inventor, this will be arranged.

Amendments to the Specification

A Substitute Specification is being submitted herewith as a separate document in accordance with 37 CFR 1.52(b)(4). The Substitute Specification includes an Abstract on a separate sheet as requested and the text of the claims prior to entry of the Preliminary Amendment. The only changes from the original Specification are (a) use of section identifiers and formatting as preferred by

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USPTO practice and (b) removal of underlining from some of the text. Therefore, only a clean version is being provided. A separate document showing changes in the text is not being submitted because the only changes are in the section headings and in the removal of underlining.

Applicant notes that this Substitute Specification was created by using an Optical Character Recognition process on the original Specification as received and filed. The Substitute Specification was then checked for accuracy. Any differences in the text that were not discovered are unintended and inadvertent.

No new matter has been added.

<u>Claim Rejections - 35 U.S.C. § 103</u>

Claims 1-3, 33-35, 64-66 and 85-95 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,692,761 to Robinton in view of European Patent Application EP 0852419 to Liberman and U.S. Patent Publication 2003/0097482 to DeHart et and U.S. Patent Publication 2003/0103521 to Raphaeli et al. Applicant respectfully traverses these rejections and asks that the claims as be reconsidered in view of the claim amendments and arguments discussed below.

<u>Regarding claim 1</u>, page 4 of the Office Action states that Robinton discloses the limitation that "each message contains at least a progressive message number." The Office Action cites this language from Robinton's Abstract: "information which indicates the number of message transmissions required to transfer a data package from the transmitting unit to the master unit". However, this language from

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Robinton does not correspond to the claim limitation because the number of message transmissions required to transfer a data package from the transmitting unit to the master unit" does not relate to a "progressive message number". Applicant respectfully submits that the example discussed in the following paragraphs will explain this point.

If a transmitting unit transmits five messages on a transmission channel in sequence, and each message is numbered as follows:

Message number 1

Message number 2

Message number 3

Message number 4

Message number 5

In this case, the assigned numbers 1, 2, 3, 4 and 5 are the "progressive message numbers"; i.e., each message is numbered. The message following message number N will receive progressive number N+1. This is what Claim 1 requires.

Robinton does not disclose this. Instead, Robinton requires that each message contains "information which indicates the number of message transmissions required to transfer a data package from the transmitting unit to the master unit". A simple example of this would be as follows: A message from transmitting unit A must be transmitted to a master unit M. Because of network conditions, a longer or shorter path may be followed by a message. If a high noise level is present, the path travelled by the message must be short, to avoid message

corruption. This means that a larger number of message re-generations are required along the transmission path. The message must pass through a larger number of nodes, each of which re-generates the message. The "number of message transmissions required" is therefore the number of message re-generations required to transmit the message from transmitting unit A to master unit M.

If noise is present on the network, for example, the message may be re-generated ten times before reaching the master unit. The message must pass through ten nodes. In that case, the "number of message transmissions required" would be ten. If a lower level of noise is present, then, five message re-generations may be sufficient. For example, the message may skip one node every two nodes along the path. In this case the "number of message transmissions required" would be five. It is apparent that that such a concept as disclosed by Robinton is unrelated to the claim limitation "each message contains at least a progressive message number."

Claim 1 as amended also requires that each message contains "an addressee identification number indicating a specific one of the control devices to which the message is finally addressed." The Office Action cites Robinton for this limitation but, in so doing, confuses the claimed "addressee identification number" with the intermediate destination address and intermediate source address taught by Robinton. This distinction is explained in the following discussion.

One of the features of the claimed method is that no intermediate destination address is required. The transmission protocol is advantageous also due to its

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simplicity. A message contains the identification number of the originating unit and of the final message destination. A description of the intermediate path is not required. Robinton, conversely, is based on the idea of including information about intermediate addressees in the message.

To further explain this distinction, claim 1 requires that the "messages being addressable selectively to a specific control device via said addressee identification number." This concept means that:

- a message is usually intended for a specific final addressee;
- the message contains the identification number of the final addressee;
- the message does not contain any intermediate identification number, i.e., it does not contain a description of the path that shall be followed to reach the final addressee.

The language cited from Robinton is based upon an entirely different approach: the message must be routed along a specific path. The path is determined based on the condition of the network. The message must contain the description (or at least a partial description) of the path. According to Robinton, at col. 8, lines 19-22, as quoted in the Office Action, "intermediate remote unit 26f will then store and forward the data package in the message to its preferred down link node address, which is the address of the master unit in this instance". The message according to claim 1 does not have an intermediate address stored therein, but only the final addressee number. The method of claim 1 does not provide for any "preferred down link node". The method of the invention simply provides for a random propagation of the message along the transmission channel or network. A

message contains the final destination address and each node which receives the message simply generates an echo thereof. The message is not routed along a pre-determined path. It is randomly propagated along the network. Starting from the unit which first generates the message, the message will propagate freely along the entire network. Each node encountered by the message will generate an echo of the message. Based on this mechanism, the message can reach any (all) nodes of the network, without any routing being required. The nodes do not have to store any data for routing purposes, nor is the condition of the network of any use or interest in determining the path along which the message shall be routed. The message is simply continuously re-generated by echoes until it reaches the final addressee (the only addressee identified in the message by the addressee identification number).

According to the present invention, each node which receives a message which is not addressed to that node will simply generate an echo and cause it to propagate along the network. Robinton is different in that the intermediate addressee in Robinton which receives a message generates an echo which is selectively addressed to a precisely identified intermediate node along a route. The route is determined based on the network conditions and network topology. This is an entirely different concept.

The Office Action cites Liberman as a secondary reference and states that Liberman teaches the limitation that "wherein when a control device receives a message containing an addressee identification number differing from its own identification number after a given delay interval said control device generates and

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transmits on said channel at least one echo of said message that is not addressed to a specific intermediate control device on said channel or a next control device along a specific message route, unless a reply to said message was received from the control device to which said message was addressed." The Office Action cites page 4, lines 2-12, of Liberman. Applicant disagrees.

What is disclosed by Liberman on page 4 is a preliminary mapping procedure, the result of which is to acquire the structure of the network. The steps recited on page 4, lines 1-12, indicated that the result of the process is a complete description of the routes from the Central Unit (CU) to the various nodes. The CU receives from the most distant nodes a message indicating the route to be followed to move forward a message from the CU to the node. This is entirely different from the method of Claim 1 because a mapping process is simply not required. Both Robinton and Lieberman, conversely, require a mapping process and provide for message routing.

Further, Liberman does not teach "generating an echo". An "echo" is a replica of the message. Conversely, because the purpose of Liberman is mapping, the message generated by the node during the mapping process cannot be a replica (an echo) of the received message, but must be something else. As Liberman explains on page 4, line 10 (paragraph 4), "Node 5 receives the replies of 1 & 2, storing the last replying node. Nodes 6 and 7 receive a reply of node 3. The nodes wait for a burst time and when it comes they transmit the burst log-on message via the received routes: node 5 via node 2, nodes 6 & 7 via node 3." This means that

nodes 5, 6 and 7 <u>do not</u> generate an echo (i.e. a replica) of the received message. Instead, they send back a message which contains the address of "the last replying node". This is not a replica or echo of the received message.

The method of the present invention provides that a node which receives a message addressed to a different node (i.e. not the receiving node), will simply duplicate (copy) the message and re-send it as such. It will not generate a different or altered message. The basic idea of the claimed invention is just as simple: the generic node which receives the message addressed to a different final addressee will take no action but generating an identical message (except for a counter or time to live field which could be eventually be updated). The message content, in particular the final destination, will not be modified. The content (pay load) of the message is not altered. In both Robinton and Liberman, conversely, the message which is re-generated by a node is also altered by the node. The message is not a simple echo.

The very idea of Robinton and also of Liberman is that the node generating a response message will not simply copy and re-transmit the message. Rather, the methods will introduce in the replying message a piece of information which serves (in both cases) for routing purposes. Routing is not the purpose of the present invention and is not provided by the method of the invention. Thus, even combining Robinton and Liberman, those of skill in the art would not have obtained the claimed invention.

Moreover, claim 1 requires that the "echo is not addressed to a specific intermediate control device or a next control device along a specific message route". Lieberman teaches just the opposite. According to the text on page 4, line 10 (paragraph 4) of Liberman, the remote nodes 5, 6, 7 send a response to the received message "via the received routes". This means that the responding node generates a response (not an echo) which is indeed addressed to the node from which it received the message, namely a specific intermediate control device or a next control device along a specific message route. <u>This is just the opposite of what Claim 1 requires.</u>

The methods of Liberman and Robinton are not based on echo generation and therefore the risk of unlimited echo generation does not exist in those methods and systems. There is no motivation, therefore, to combine Robinton and Lieberman with further references which allegedly teach unlimited echo-preventing routines.

For any and all of the foregoing reasons, claim 1 is patentable over the cited prior art.

<u>Claims 2, 3, and 85-91</u> are dependent on claim 1 are therefore patentable for the same reasons.

<u>Claim 33</u> includes the following limitations that are substantially the same as the limitations discussed above with reference to claim 1 in distinguishing Robinton and Liberman:

- "each message contains at least a progressive message number"

- "each message contains "an addressee identification number indicating a specific one of the control devices to which the message is finally addressed ....said messages being addressable selectively to a specific control device via said addressee identification number."

- "wherein when a control device receives a message containing an addressee identification number differing from its own identification, after a given delay interval said control device generates and transmits on said channel at least one echo of said message that is not addressed to a specific intermediate control device on said channel or a next control device along a specific message route, unless a reply to said message has already been received from the control device to which said message was addressed."

For the reasons explained above with reference to claim 1, these limitations are not taught by Liberman or Robinton. Therefore, claim 33, and dependent claims 34, 35, 92, and 93, are each patentable over the cited prior art.

Claim 64 includes the following limitations that are substantially the same as limitations discussed above with reference to claim 1 in distinguishing Robinton and Liberman:

- "said control device being programmed to receive and transmit messages via said communication channel, each of which contains at least a progressive message number;"

- "said control device being programmed to receive and transmit messages via said communication channel, each of which contains at least ... an addressee

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identification number indicating a specific one of the control devices to which the message is finally addressed"

- "said control device ... is programmed so that when it receives a message containing an addressee identification number differing from its own identification number, from said channel via its own transmission and reception device, it transmits at least an echo of the message received on said channel after a given delay interval, the echo not being addressed to a specific intermediate control device on said channel or a next control device along a specific message route, unless it receives on said channel a reply to said message, said delay interval specific to said control device so as to prevent overlapping of messages on said communication channel"

For the reasons explained above with reference to claim 1, these limitations are not taught by Liberman or Robinton. Therefore, claim 64, and dependent claims 65, 66, 94, and 95, are each patentable over the cited prior art.

Statement Regarding the Finality of the Office Action

Section 2b of the Office Action Summary indicates that the Office Action is non-final. Page 25 of the Office Action contains a statement that the action is final. Applicant believes that this second statement was made inadvertently and in error because this is the first Office Action after the filing of a Request for Continued Examination. Therefore, Applicant is treating the Office Action as non-final.

Conclusion

Applicant has commented on some of the distinctions between the cited references and the claims to facilitate a better understanding of the present invention. This discussion is not exhaustive of the facets of the invention, and Applicant hereby reserves the right to present additional distinctions as appropriate. Furthermore, while these remarks may employ shortened, more specific, or variant descriptions of some of the claim language, Applicant respectfully notes that these remarks are not to be used to create implied limitations in the claims and only the actual wording of the claims should be considered against these references.

Pursuant to 37 C.F.R. § 1.136(a), Applicant petitions the Commissioner to extend the time for responding to the Office Action for 3months from April 13, 2011, to July 13, 2011. Applicant authorizes the Commissioner to charge Deposit Account No. 23-0035 in the amount of $1,110.00 for the petition fee.

The Commissioner is authorized to charge any deficiency or credit any overpayment associated with the filing of this Response to Deposit Account 23-0035.

Respectfully submitted,

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